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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,054	11/21/2001	Dean R. Dodge	1316N-001660	1466

27572 7590 11/21/2003

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EXAMINER

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ART UNIT PAPER NUMBER

3683

DATE MAILED: 11/21/2003

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**GROUP 3600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 14

Application Number: 09/990,054  
Filing Date: November 21, 2001  
Appellant(s): DODGE ET AL.

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Michael J. Schmidt  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 9/2/03.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

The rejection of claims 1-6 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

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**(9) Prior Art of Record**

4,964,493	Yamaura et al.	10-1990
5,529,154	Tanaka	6-1996
5,042,624	Furuya et al.	8-1991

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed disclosure does not support the limitation of a mid/high speed valve comprising *only* first and second valve discs. Similar to the way in which the second disc provides support for the first disc during fluid flow, the unnumbered portion of bolt 66 shown in the area of element 96 provides support for the second disc during fluid flow and, therefore, could be considered to be a part of the mid/high speed valve. It is also noted that the use of the word "only" does not properly limit the claim language in light of the use of the open-ended transitional term "comprising" in the preamble of the claim.

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 1. Claim 1 recites the limitation "said single outer chordal edge" in 3 from the bottom. There is insufficient antecedent basis for this limitation in the claim.

The remaining claims are indefinite due to their dependency from claim 1.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5042624 to Furuya et al. in view of US Patent 5529154 to Tanaka and US Patent 4964493 to Yamaura et al.

Re: claim 1. Furuya et al. show in figures 1 and 3 a damper comprising: a pressure tube 1 forming a working chamber 1a,1b; a reservoir tube 6 disposed around the pressure tube, the reservoir tube forming a reservoir chamber 7 between the pressure tube and the reservoir tube, a base valve assembly 4 disposed between the working chamber and the reservoir chamber for regulating flow of damping fluid in a first

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direction between the working chamber and the reservoir chamber, the base valve assembly comprising: a valve body 4f defining a fluid passage 402,403; a first valve disc 4e disposed adjacent the valve body for closing the fluid passage, the first valve disc having an outside edge and a central axis; a second valve disc 4d disposed adjacent said first valve disc, the second valve disc having an outer edge supporting the first valve disc at a position between the outside edge and the central axis of the first valve disc, but does not specifically disclose that the outer edge of the second valve disc is chordal.

Tanaka teaches in figures 3a and 4a the use of a damper having a second valve disc 19 which is disposed adjacent to a first valve disc 17, the second valve disc having an outer edge 19a supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc. Tanaka further teaches in col. 5 lines 46-51 that the damping force may be varied depending on the shape of valve disc 19 and the shape, angle, and depth of the outer edge 19a.

Yamaura et al. teach in figure 2 the use of a damper having a second valve disc 144 which is disposed adjacent to a first valve disc 138 via element 142, the second valve disc having an outer edge shown in the area of element number 158 supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc (during large deflections of element 138). Yamaura et al. particularly teach in figure 4 the use of the outer edge of the second valve disc being a chordal edge as shown in the area of element number 162.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the outer edge of the second valve disc of Furuya et al. to have included a chordal outer edge, in view of the teachings of Tanaka and Yamaura et al., in order to provide a pivot edge for the first valve disc to achieve a desired damping force as best determined by routine experimentation.

Re: claim 2. Furuya et al. show in figure 1 a piston 5 dividing the working chamber into an upper portion 1a and a lower portion 1b the base valve assembly being disposed between the lower portion of the working chamber and the reservoir chamber.

Re: claims 3 and 5. Furuya et al. show in figure 1 the base valve comprising a pressure valve 4h,4g regulating the damping fluid in a second direction.

Re: claim 4. Furuya et al. show in figures 1 and 3 a damper comprising: a pressure tube 1 forming a working chamber 1a,1b; a piston 5 disposed within the working chamber, the piston dividing the working chamber into an upper working 1a and a lower working chamber 1b; a reservoir tube 6 disposed around the pressure tube, the reservoir tube forming a reservoir chamber 7 between the pressure tube and the reservoir tube; a base valve 4 assembly disposed between the lower working chamber and the reservoir chamber for regulating flow of damping fluid in a first direction between the lower working chamber and the reservoir chamber, the base valve assembly comprising: a low speed valve movable between a closed position and an open position, the low speed valve including a first valve disc 4e having an outside edge and a central axis and a second valve disc 4d supporting the first valve disc along an edge at a position between the outside edge and the central axis of the first valve disc;

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and a mid/high speed valve movable between a closed position and an open position, the mid/high speed valve comprising the first and second valve disc as disclosed in the first 9 lines of the abstract and in col. 6 lines 11-42 , but does not specifically disclose that the outer edge of the second valve disc is chordal.

Tanaka teaches in figures 3a and 4a the use of a damper having a second valve disc 19 which is disposed adjacent to a first valve disc 17, the second valve disc having an outer edge 19a supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc. Tanaka further teaches in col. 5 lines 46-51 that the damping force may be varied depending on the shape of valve disc 19 and the shape, angle, and depth of the outer edge 19a.

Yamaura et al. teach in figure 2 the use of a damper having a second valve disc 144 which is disposed adjacent to a first valve disc 138 via element 142, the second valve disc having an outer edge shown in the area of element number 158 supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc (during large deflections of element 138). Yamaura et al. particularly teach in figure 4 the use of the outer edge of the second valve disc being a chordal edge as shown in the area of element number 162.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the outer edge of the second valve disc of Furuya et al. to have included a chordal outer edge, in view of the teachings of Tanaka and Yamaura et al., in order to provide a pivot edge for the first valve disc to achieve a desired damping force as best determined by routine experimentation.



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7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaura et al. in view of Tanaka. Yamaura et al. show in figures 1 and 2 a damper comprising: a pressure tube<sup>10</sup> forming a working chamber 12,14; a piston 102 disposed within the working chamber, the piston dividing the working chamber into an upper working chamber 12 and a lower working chamber 14; a piston valve assembly 100 attached to the piston for regulating flow of damping fluid between the upper working chamber and the lower working chamber, the piston valve assembly comprising: a low speed valve movable between a closed position and an open position, the low speed valve including a first valve disc 138 having an outside edge and a central axis and a second valve disc 144 supporting via element 142 the first valve disc along an edge at a position between the outside edge and the central axis of the first valve disc (during large deflections of element 138); and a mid/high speed valve movable between a closed position and an open position, the mid/high speed valve comprising the first and second valve disc as disclosed in col. 7 lines 40 – col. 9 line 10, but does not specifically disclose that the outer edge of the second valve disc is chordal.

Tanaka teaches in figures 3a and 4a the use of a damper having a second valve disc<sup>19</sup> which is disposed adjacent to a first valve disc 17, the second valve disc having an outer edge 19a supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc. Tanaka further teaches in col. 5 lines 46-51 that the damping force may be varied depending on the shape of valve disc 19 and the shape, angle, and depth of the outer edge 19a.

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Yamaura et al. teach in figure 2 the use of a damper having a second valve disc 144 which is disposed adjacent to a first valve disc 138 via element 142, the second valve disc having an outer edge shown in the area of element number 158 supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc (during large deflections of element 138). Yamaura et al. particularly teach in figure 4 the use of the outer edge of the second valve disc being a chordal edge as shown in the area of element number 162.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the outer edge of the second valve disc of Yamaura et al. to have included a chordal outer edge, in view of the teachings of Tanaka and Yamaura et al., in order to provide a pivot edge for the first valve disc to achieve a desired damping force as best determined by routine experimentation.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 2, and 3 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, and 3 of copending Application No. 09/552125 in view of US Patent 5529154 to Tanaka and US Patent 4964493 to Yamaura et al.

Both applications claim the invention substantially as set forth above, but the instant invention is specific as to the chordal shape of a pivot edge created by the outer edge of the second valve disc.

Tanaka teaches in figures 3a and 4a the use of a damper having a second valve disc 19 which is disposed adjacent to a first valve disc 17, the second valve disc having an outer edge 19a supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc. Tanaka further teaches in col. 5 lines 46-51 that the damping force may be varied depending on the shape of valve disc 19 and the shape, angle, and depth of the outer edge 19a.

Yamaura et al. teach in figure 2 the use of a damper having a second valve disc 144 which is disposed adjacent to a first valve disc 138 via element 142, the second valve disc having an outer edge shown in the area of element number 158 supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc (during large deflections of element 138). Yamaura et al. particularly teach in figure 4 the use of the outer edge of the second valve disc being a chordal edge as shown in the area of element number 162.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the outer edge of the second valve disc of

Application no. 09/552125 to have included a chordal outer edge, in view of the teachings of Tanaka and Yamaura et al., in order to provide a pivot edge for the first valve disc to achieve a desired damping force as best determined by routine experimentation.

This is a provisional obviousness-type double patenting rejection.

10. Claims 4 and 5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8 and 9 of copending Application No. 09/552125 in view of Furuya et al. '624, US Patent 5529154 to Tanaka and US Patent 4964493 to Yamaura et al. Both applications claim the invention substantially as set forth above, but the instant invention is specific as to the chordal shape of a pivot edge created by the outer edge of the second valve disc.

Tanaka teaches in figures 3a and 4a the use of a damper having a second valve disc 19 which is disposed adjacent to a first valve disc 17, the second valve disc having an outer edge 19a supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc. Tanaka further teaches in col. 5 lines 46-51 that the damping force may be varied depending on the shape of valve disc 19 and the shape, angle, and depth of the outer edge 19a.

Yamaura et al. teach in figure 2 the use of a damper having a second valve disc 144 which is disposed adjacent to a first valve disc 138 via element 142, the second valve disc having an outer edge shown in the area of element number 158 supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc (during large deflections of element 138). Yamaura et al. particularly teach in

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figure 4 the use of the outer edge of the second valve disc being a chordal edge as shown in the area of element number 162.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the outer edge of the second valve disc of Application no. 09/552125 to have included a chordal outer edge, in view of the teachings of Tanaka and Yamaura et al., in order to provide a pivot edge for the first valve disc to achieve a desired damping force as best determined by routine experimentation.

Also, Application no. 09/552125 claims the use of the mid/high valve including a third valve disc supporting the second valve disc. Furuya et al. teach in figures 1 and 3 the use of a damper having a mid/high speed valve including a third generally planar valve disc 4c supporting the second planar valve disc as disclosed in the abstract lines 1-9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the mid/high speed valve of the instant application to have included a third valve disc, as taught by Furuya et al., in order to provide a means of supporting the second valve disc and to provide a means of assisting in second stage damping.

This is a provisional obviousness-type double patenting rejection.

11. Claim 6 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 14 of copending Application No. 09/552125 in view of Yamaura et al. in view of Tanaka. Both applications claim the invention substantially as set forth above, but the instant invention

is specific as to the chordal shape of a pivot edge created by the outer edge of the second valve disc.

Tanaka teaches in figures 3a and 4a the use of a damper having a second valve disc 19 which is disposed adjacent to a first valve disc 17, the second valve disc having an outer edge 19a supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc. Tanaka further teaches col. 5 lines 46-51 the damping force may be varied depending on the shape of valve disc 19 and the shape, angle, and depth of the outer edge 19a.

Yamaura et al. teach in figure 2 the use of a damper having a second valve disc 144 which is disposed adjacent to a first valve disc 138 via element 142, the second valve disc having an outer edge shown in the area of element number 158 supporting the first valve disc at a position between the outside edge and a central axis of the first valve disc (during large deflections of element 138). Yamaura et al. particularly teach in figure 4 the use of the outer edge of the second valve disc being a chordal edge as shown in the area of element number 162.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the outer edge of the second valve disc of Application no. 09/552125 to have included a chordal outer edge, in view of the teachings of Tanaka and Yamaura et al., in order to provide a pivot edge for the first valve disc to achieve a desired damping force as best determined by routine experimentation.

Also, Application no. 09/552125 claims the use of the mid/high valve including a third valve disc supporting the second valve disc. Yamarua et al. teach in figure 2 the use of a damper having a mid/high speed valve including a third generally planar valve disc 140 supporting the second planar valve disc. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the mid/high speed valve of the instant application to have included a third valve disc, as taught by Yamaura et al., in order to provide a means of supporting the second valve disc and to provide a means of assisting in second stage damping.

This is a provisional obviousness-type double patenting rejection.

**(11) Response to Argument**

Applicant argues that the Tanaka reference teaches the use of a recess and fails to define a chordal edge. Examiner notes that a chord is a linear recession from the circular outer edge and emphasizes that it is the combination of Furuya et al. in view of Tanaka and Yamaura et al. that teaches the claimed invention. Furuya et al. is used for the teaching in col. 5 lines 46-50 that the shape of a recess 19a from the outer edge of a disc 19 affects the damping force generated by the disc. Yamaura et al. is used for the teaching of a disc outer edge recess being specifically in the form of a chord. The chordal edge of second valve disc 144 of the Yamaura reference is clearly taught in figure 4.

Applicant also argues that the second valve disc 144 of Yamaura et al. is not disposed adjacent to first valve disc 138. Examiner first notes that such an argument with respect to the Yamaura et al. reference is irrelevant since Yamaura et al. is utilized

solely for the teaching of a second disc with a chordal outer edge and since the claimed arrangement of the first and second valve discs is covered by the base reference as clearly shown in figure 3 of Furuya in which the second valve disc 4d is disposed adjacent to the first valve disc 4e with the second valve disc having an outer edge that provides support for the first valve disc. Examiner further notes that the argument with respect to Yamaura et al. is incorrect since the second valve disc 144 of Yamaura et al. is, indeed, disposed adjacent to a first valve disc 138 via element 142 and that the chordal edge of the second disc 144 provides support for the first valve disc 138 particularly during large deflections. Examiner notes that the claim language does not preclude the first and second valve discs from being arranged adjacent via intervening elements.

Applicant also argues that Furuya does not disclose a first valve disc 4e. Examiner maintains that a first valve disc is clearly shown in figure 3 of Furuya et al. in the area of the lead arrow associated with element number 4e. The first valve disc 4e is also clearly shown adjacent to the second valve disc 4d.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA



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1971). Examiner maintains that it was within the level of ordinary skill at the time the claimed invention was made to have a first valve disc adjacent to and supported by the outer edge of a second valve disc as shown in Furuya et al., to adjust the shape of a recess from an outer edge of a disc to affect damping force characteristics as taught by Tanaka, and to specifically shape the outer edge of a second disc in the form a chord as taught by Yamaura et al. Accordingly, the rejections of the claims based on Furuya et al., Tanaka, and Yamaura et al. are maintained.

Finally, since Applicant failed to address the 112 first and double patenting issues, those rejections have also been maintained.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

mmb 11/17/03  
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November 17, 2003


Conferees

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